



PREMIUM COLLECTION AND INFRASTRUCTURE INVESTMENT OF PUBLIC HEALTH INSURANCE COMPANIES IN INDIA: A COMPARATIVE ANALYSIS

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ABSTRACT

Health insurance business is important business in India. India has vast population and they live mainly in joint family. Family can live healthy when they cover their lives with health insurance. The health insurance reduces the worry of the health problems. Health insurance business depends upon premium collection and its investment in investment instruments which boost the premium collection. Infrastructure investment is one of the important parts of investment portfolio. Relationship between premium collection and investment infrastructure is studied in this paper for four public health insurance companies using the simple linear regression (SLR) analysis. In this paper, premium collection of Health Insurance Company is powerfully related to the infrastructure investment and National Insurance Co. Ltd. (NI) is successfully invested his health premium collection in infrastructure investment.

KEYWORDS: SLR, Premium Collection, Infrastructure Investment, IRDA, Portfolio Investment.

INTRODUCTION:

Family can live with healthy life without having worry about their health problems. The health insurance reduces the worry about the health problems. Health insurance is purchased in advance by an individual or a group after paying a fee called premium. This collected premium of health insurance companies is invested as per IRDA portfolio investment regulation in financial markets for good returns to pay expenses and claim of insured person. The health care needs are vast in India. For better business of health insurance companies in India, infrastructure investment is one of the important investment areas in investment portfolio of health insurance business. The present paper is studied on the relationship between health insurance premium collection and infrastructure investments using simple linear regression (SLR) analysis.

REVIEW OF LITERATURE:

Bhole, L. M. (2004). in 'Financial Institutions and Markets', Khan, M. Y. (2000). in 'Indian Financial System', Pathak, B. (2006). in 'The Indian Financial System', Saha, S. S. (2013). in 'Indian Financial System and Markets', they discuss in their books mainly the IRDA regulation, premium collection, investment pattern, sectorwise investment, annual reports. Nagaraju, Y. (2014). studies in journal 'A Study on Performance of Health Insurance Schemes in India'. on coverage of health insurance scheme, awareness of the beneficiaries and satisfaction towards scheme, service quality of health care. Swathi, K. & Anuradha, R. (2017). in their journal 'Health Insurance in India-An Overview' study on the concept and benefits of health insurance, overview of health insurance in India. Anita, A. (2008). in her journal 'Emerging Health Insurance in India- An Overview' discusses the health insurance scenario in India, health insurance products in India, role of IRDA, different health insurance plans and privatization of health insurance. Acosta, R. S. (2014). describes in journal 'Effects of Health Insurance Concentration Market on Insurance Coverage in Colombia', structure of health insurance market in Colombia, role of insurance as a guarantee off access of health insurance.

In the above study, literatures relating to relation between health insurance premium collection and infrastructures investments on Health Insurance are not sufficient.

DATA AND METHODOLOGY:

Nature of Research	Exploratory in nature
Nature of Data	Secondary in nature
Source of Data	Books Journal Articles Websites GIC Annual Reports
Sample Size (Four public non-life insurance companies are selected)	National Insurance Co. Ltd. (NI) The New India Assurance Co. Ltd. (NIA) Oriental Insurance Co. Ltd. (OI) United India Insurance Co. Ltd. (UII)
Period of Study	2004-2005 to 2013-2014

Objectives	Statistical Tools
To find the relation between health insurance premium collection and infrastructures investments	Simple Linear Regression Analysis

OBJECTIVES OF THE STUDY:

The present study is made to find the following objectives:

- To find the relation between health insurance premium collection and infrastructures investment;
- To identify the better infrastructures investment among four public health insurance companies.

RESULT AND DISCUSSION:

In this paper, the premium collection (Table-II) and its partial investment in Infrastructure investment (Table-I) of a National Insurance Co. Ltd. (NI), The New India Assurance Co. Ltd. (NIA), Oriental Insurance Co. Ltd. (OI) and United India Insurance Co. Ltd. (UII) shown in following way.

**Table-I: Infrastructure investment
(Rs in Crore)**

YEAR	NI	NIA	OI	UII
2004-2005	600.49	1050.08	460.01	691.25
2005-2006	719.87	1206.33	527.16	684.55
2006-2007	836.83	1279.13	689.70	730.03
2007-2008	876.61	1783.04	817.00	810.68
2008-2009	1083.46	1781.67	574.72	1441.96
2009-2010	1209.25	1792.49	827.28	1168.64
2010-2011	1679.99	1751.62	1056.55	1569.18
2011-2012	2173.94	1794.62	1229.75	2082.92
2012-2013	2486.97	2310.56	1591.16	2508.39
2013-2014	2494.55	2674.84	1765.49	3343.25
Total	14161.96	17424.38	9538.82	15030.85

Source: IRDA, Annual Reports

**Table-II: Premium Collection (within and outside India)
(Rs in Crore)**

Year	NI	NIA	OI	UII
2004-2005	3810.65	5103.16	3090.55	2944.46
2005-2006	3536.34	5675.54	3609.77	3154.78
2006-2007	3827.12	5936.78	4020.78	3498.77
2007-2008	4021.97	6151.97	3900.22	3739.56
2008-2009	4295.85	6455.79	4077.89	4277.77
2009-2010	4645.99	7099.14	4854.67	5239.05
2010-2011	6245.17	8225.51	5569.88	6376.66
2011-2012	7815.69	10073.88	6194.6	8179.29
2012-2013	9194.61	11873.49	6737.66	9266.04
2013-2014	10260.98	13727.61	7282.54	9708.93
Total	57654.37	80322.87	49338.56	56385.31

Source: IRDA, Annual Reports

Findings:

In above Table-I and Table-II, it is shows that NIA has invested more in infrastructure investment and also collected more health insurance premium during the study period among four public health insurance companies where OI has invested comparatively less amount in infrastructure investment and also collected lesser health insurance premium.

In this section, Simple Linear Regression (SLR) Analysis is made to find the relation between health insurance premium and infrastructure investment. For this purpose, assumptions are shown in Table-III and result of SLR analysis is shown in Table-IV.

Table-III: Assumptions of SLR Analysis

SL. NO.	Assumptions	Statistical Test	Condition to Fulfil	Fulfilled/Not
1	Normality of residuals	Shapiro-Wilk test	P-Value >0.05	Fulfilled
2	Independence of residuals	Durbin-Watson test	Value is 2 or nearly 2	Fulfilled
3	Linearity between dependent and independent variable	ANOVA	P-Value < 0.05	Fulfilled
4	Homoscedasticity of residual	Breusch-Pagan (BP) test	P-Value >0.05	Fulfilled
5	No collinearity or no multicollinearity	Variance Inflation Factor (VIF)	VIF<10	Fulfilled

Source: Computed by the Author

Findings:

The result of SLR assumptions in Table-III shows that all five assumptions are fulfilled and SLR analysis is used for the present study.

SLR analysis:

In this analysis, taking premium collection as depended variable (DV) and Infrastructure investment as independent variable (IV), the analysis is made using the SPSS 20.0. The SPSS result of SLR for National Insurance Co. Ltd. (NI), The New India Assurance Co. Ltd. (NIA), Oriental Insurance Co. Ltd. (OI) and United India Insurance Co. Ltd. (UII) is shown in Table-IV.

Table-IV: Result of Estimated standardized Coefficients

Parameter	Standardized Coefficient (Beta)
NI	0.981
NIA	0.902
OI	0.973
UII	0.959

Findings:

The Table-IV finds that relationship exists between Infrastructure investment and premium collection of four public Health Insurance Company during the study period 2004-2005 to 2013-2014 and the study shows that Infrastructure investment of National Insurance Co. Ltd. (NI) has an important impact to increase the premium collection in Indian health insurance market.

CONCLUSION:

This paper shows that premium collection of Health Insurance Company is strongly related to the infrastructure investment in Indian health insurance market. In the study, National Insurance Co. Ltd. (NI) is effectively invested his health premium collection in infrastructure investment as compared to The New India Assurance Co. Ltd. (NIA), Oriental Insurance Co. Ltd. (OI) and United India Insurance Co. Ltd. (UII).

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